**Department of Energy**
**National Nuclear Security Administration**
Washington, DC 20585

January 4, 2008

OFFICE OF THE ADMINISTRATOR

Dr. Michael R. Anastasio
Laboratory Director
Los Alamos National Security, LLC
Mail stop A100
Los Alamos, New Mexico 87545

Dear Dr. Anastasio:

On January 22, 2007, Los Alamos National Security, LLC (LANS) submitted a report into the Department of Energy (DOE) Office of Enforcement Noncompliance Tracking System documenting potential noncompliances with nuclear safety requirements associated with two separate events in January 2007. The events involved hand injuries sustained by workers conducting glovebox activities at Technical Area 55 and Chemistry and Metallurgy Research facilities. Instead of launching its own investigation, the National Nuclear Security Administration (NNSA) agreed that LANS would investigate these two events. On February 23, 2007, LANS issued its investigation report. With receipt of additional information from you, to include the preliminary results of medical testing, the serious nature of these events are now understood in that one of the workers may exceed the annual regulatory exposure limit of 5 Rem Total Effective Dose Equivalent.

Nuclear safety performance at Los Alamos National Laboratory (LANL) over the past several years has been inadequate. Changes in contractor senior management, organizational structure, and safety programs aimed at correcting systemic nuclear safety and cultural issues prior to LANS assuming responsibility for LANL in June 2006 have not led to sustained performance improvement. In my February 16, 2007, letter to you on a safety enforcement matter that indicated systemic problems persisted, I stated, "My expectation is that the prompt and aggressive completion of corrective actions focused at resolving underlying causes will be one of your highest priorities. This expectation will serve as the standard to which I will hold you during future enforcement deliberations, should they become necessary."

Although the hazards associated with these glovebox activities were known and understood, required hazard controls were either ineffective or not implemented. The NNSA expects workers to be protected from hazards in gloveboxes and that management oversight assures that workers follow requirements designed to protect them from these hazards. To this end, NNSA has considered how best to approach the potential noncompliances associated with the glovebox hand injuries in January 2007. Our review of documents provided by LANS demonstrates the need for improved management oversight of work activities, corrective action

Printed with soy ink on recycled paper

implementation, work control, and medical response. Based on your investigation report including judgments of need and the causal analysis, the Department is best served by deferral of formal enforcement action at this time, in favor of enabling you to focus management attention on identifying the broad deficiencies which led to these events. Your effort in this regard should extend to all glovebox activities. Corrective actions need to be comprehensive in order to achieve sustained improvement in nuclear safety performance.

Therefore, pursuant to 10 C.F.R. 820.8(b), *Special Report Orders*, you are required to submit a report to me with a copy to the DOE Office of Enforcement within 90 days of receipt of this Order that addresses the following:

1. A detailed matrix or table that maps corrective action plan items to each of the causal factors identified in the causal analyses for the two separate events.

2. The complete corrective action plans and any modifications as they are approved. For the corrective action plans, address the following:

    a. Commitments necessary to ensure successful outcomes of the corrective action plans.
    b. A list of all organizations involved in the corrective action plans and the identity of the responsible managers for these plans in those organizations.
    c. The sequence and schedule of corrective actions and over what time period they will take place.
    d. The resources needed to complete the corrective actions.
    e. The resource commitment alignment with the sequence and schedule for corrective action implementation (i.e., future fiscal year funding profile that assures timely completion of corrective actions).

3. For each corrective action, the detailed closure descriptions that demonstrate full resolution of problems identified in the causal analysis.

4. A copy of the extent of condition review report used to determine the scope and depth of the problems identified in causal analyses.

5. The latest dose estimate for each worker involved including the date of each dose estimate.

6. A description of how new knowledge gained from these events will be used in the future, including the following:

    a. A summary of how LANL will ensure it will not need to relearn the same lessons in the future.
    b. An explanation of how the nuclear safety culture has improved because of the corrective actions taken in response to these events.

c. An explanation of how LANL shared the lessons learned from these events with others both within and external to the laboratory.

7. An explanation as to why the LANS management assessment program did not adequately identify precursors to the January 2007 glovebox hand injuries.

8. A list of specific corrective actions taken to improve the LANS management assessment program.

9. A summary of significant changes in LANL glovebox operations supported by the extent of condition reviews, causal analysis(es), and how those changes have been or are being brought about by the corrective actions. Include a rationale as to why these changes will aid in prevention of future glovebox events.

After the 90 day period stated in this Special Report Order (SRO), NNSA and the DOE Office of Enforcement will evaluate the effectiveness of actions taken to address these concerns. This evaluation will be based on: (1) the LANS response to the information requested; (2) progress in implementing Noncompliance Tracking System identified corrective actions; (3) recent nuclear safety performance; and, (4) input from the NNSA Los Alamos Site Office (LASO). We expect Los Alamos National Security to communicate and work closely with LASO to assure all line management program expectations are met.

You may request reconsideration of this SRO within 10 days of issuance. If after 10 days you have not requested reconsideration, the SRO becomes effective as written. Refusal or failure to comply with any provision of this SRO may result in action to enforce the SRO. Additionally, failure to implement and sustain effective corrective actions to improve nuclear safety performance in glovebox activities could lead to future enforcement action. Further, failure to take effective steps to address the underlying organizational behavior and safety culture deficiencies could lead to enforcement action under the quality improvement provisions of 10 C.F.R. 830, *Nuclear Safety Management*.

Sincerely,

Thomas P. D'Agostino
Administrator

cc: Marjorie Gavett, LANS
Richard Azzaro, Defense Nuclear Facilities Safety Board